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ABSTRACT

The last decade has witnessed considerable advances in the development of hardware for foreign language teaching; yet advances in the production of software, which demands tremendous outlays of time, imagination, and energy, have not kept pace. In order to tap the potential of instructional machines, educators must attempt to obviate the economic obstacles, as well as the inflexible pedagogical approaches, characteristic of past experiences with machine aids. In the future, teachers will need proper training (and credit for their training), simple-to-operate and readily-available equipment and materials, and a personal conviction as to the usefulness and efficacy of machine-assisted instruction. Other practical suggestions include making equipment available to the community, training media technicians in the needs of foreign languages, profiting from grass-roots teacher suggestions, continually sharing information within the profession, and demonstrating that the cost of the equipment can be justified by the resultant improved learning. As the expectations of the 1960's were for the most part unrealized, expectations for the 1970's must, in the words of Wilkins, "be specified, rather than hoped-for, concrete rather than speculative." (DB)

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The Future Impact of Technology on Education in Foreign Languages

Working Paper for the Steering Committee of the MLA/FLP '70's

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That there have been in the last decade considerable advances in the development of machines which can be used in foreign language teaching is indisputable: cassettes, videotape recorders, closed circuit television, film projectors which are more easily operated, overhead projectors, shortwave receivers, computers offer a multiplicity of possibilities. Discussions of the continuing improvement in hardware are found in the sources listed at the end of this paper.

Unfortunately, and the story sounds only too familiar, advances in the production of software have not kept pace. Much programming, even for the newest devices, is steeped in the theories of the fifties and earlier, and many of the capabilities of the most recent hardware are as yet untapped. As Dodge (1968:336) has pointed out computer-assisted instruction (CAI) requires collaboration between instructional and computer programmers, and it is the latter who as often as not are most conscious of the as yet unextended potential of the machine.

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Learning from the Past

The time is rapidly approaching when the use of the computer, with audio as well as visual and tactile capability on plasma screen, becomes feasible at a cost comparable with

classroom instruction through extension of access and time-sharing (as for example with the University of Illinois PLATO system in the State of Illinois). We would be well advised at this stage to analyze the reasons why the language laboratory, also potentially of considerable help in language learning, has been largely rejected in recent years. The following reasons deserve consideration as warnings:

1. The language laboratory was shipwrecked by a paucity of suitable pre-recorded materials at accessible prices. Of course, teachers could buy a set of tapes to accompany a particular text, but, to maintain student interest, teachers needed a great variety of materials from which to draw to serve many purposes.

2. At no level of instruction was the administration willing to pay for the great amount of faculty time required merely to prepare and dub lesson tapes to suit the interests and purposes of specific sets of students at particular times, let alone the vastly greater amounts of time for making their own tapes where nothing suitable was available or financially accessible. In far too many instances , particularly at college level, there was not even enough money to pay for proper monitoring.

3. The use of the laboratory was tied too closely to a particular approach to language teaching, so that a teacher wishing to work in another way had either to work out his own approach from base up (a process for which he was not allowed time or money), to ignore the laboratory, or, to please

the administration, run a laboratory program which, as was quite evident to his students, had little or nothing to do with what counted as the "real" work.

If the language laboratory, electronic classroom, closed-circuit television, videotape recorder, or even the simple cassette recorder in the classroom or dormitory, let alone the computer, are to achieve their potential as aids to learning there must be much research into new approaches to programming consistent with a changing approach to foreign language teaching. This becomes even more urgent if individualization of instruction, with its obvious need for machine assistance, is to survive. There is a need for a multiplicity of experimental segments, modules, units, or capsules which can demonstrate ways of making interesting situational dialogues or cultural contrasts; present original ways of learning the grammar; introduce problem-solving activities; involve students themselves in the making through the recording of sound tracks for visuals, spontaneous interaction with recorded voices, personalities on film, or with the computer program; and develop new methods for helping students to learn to listen, read, and write at increasingly sophisticated levels.

Where Do the Teachers in the Schools Stand in Relation to the Full Integration of Machine-Aided Learning with Their Regular Activities?

For the most part, they are still hiding behind the classroom door for several reasons.

1. Money. As Edgerton (1969:9) has observed so aptly,

"It is a fact of life that the more complex (audio-visual) materials become the more expensive they are, and the more expensive they are the more closely their purchase must be scrutinized by those who hold the purse strings. Economic considerations make it difficult or impossible for teachers to use many of these materials."

2. Convenience. In most schools, teachers must schedule the use of equipment well ahead of time, then use it at that particular class hour whether it is appropriate or not. Then the film hasn't arrived, or if it has it is the wrong one, or broken, or wound backwards. (If it is the use of tapes we are talking about there is print-through or several recording booths are out of order. We need not mention slides upside down, or an old phonograph which does not play records at the speed desired.) In other words, teachers are not supplied with aides, maintenance staff, or foreign language classrooms with permanent modern equipment they may use as they wish. The need is for simple-to-operate equipment and materials readily available at the right time.

3. Training. Very few teachers have been given more than perfunctory training in the use of both hardware and software. They are not thoroughly trained in the operation and maintenance of equipment, and in the selection, adaptation, arrangement, or creation of software and ways of integrating it into an ongoing instructional program. They may have discussed these things but they have rarely had thorough practical training in the area. It is no wonder, then, that to most teachers

any form of audio-visual aid is a pleasant extra ("enrichment" of the program) and therefore a luxury which can be omitted when time is short. Since they are not actually using what is already available, further development in this area will leave them untouched, unless they receive thorough practical training in taking pictures, making visuals, recording or dubbing tapes or cassettes, recording sound tracks for visuals of various kinds, and writing at least segments of programs.

Who is to teach them? Again the teacher trainers need to be enthused and instructed themselves. We need demonstration centers near to the teacher's local base, and frequent opportunities for teachers to exchange and discuss materials they have prepared themselves and to report on available materials they have used.

4. Credit for audio-visual qualifications. Teachers who have taken full theoretical and practical courses in the operation and preparing of materials for machine-aided learning must receive adequate recognition, either monetary or in the form of specialized appointments. If schools, responding to the increasing flexibility of academic programs, set up resource centers these must be staffed by teachers who know how to provide the resources appropriate to the type of learning desired. Teachers with specialized training must also be used to give inservice training to their colleagues. Elton Hocking says we are "a cottage industry" (personal communication attached) and we tend to have the limited parochial view of a cottage industry. Effort must be made to make our foreign-language

teaching colleagues conscious of the need to involve themselves in the rapid development going on around them if they are not to be marooned in their "foreign language island" as the tide rushes on.

5. We tend to teach as we were taught. If our future teachers are to be conscious of the potential for the improvement of learning provided by properly programmed machines, they must have had a convincing experience themselves at college level, and yet it is at this level, where financial provision has been most generous, that the unrealized potential is the greatest. It is at college level that our colleagues are least convinced that the time and effort involved are worth the investment, and that, as a consequence, student attitudes to the language laboratory in particular have most rapidly deteriorated. There is, therefore, need for a great deal of encouragement and convincing demonstration in colleges and junior colleges if foreign languages are to keep up with other subject areas in the coming CAI wave.

Can the Computer Succeed Where the Language Laboratory Failed?

Certainly the potential of the computer in teaching is fantastic and although the hardware is very expensive it can be shared. It has already proved its capacity for retaining student interest and giving the student the feeling that his needs are receiving personal and patient attention. Research into programming possibilities is proceeding apace, in other areas if not always in foreign languages.

The preparation of software for the computer, however, requires a tremendous outlay of time, imagination, and energy. Who is going to be able to give this necessary time to the development of a variety of programs with different approaches? A few dedicated individuals who may or may not be in step with present trends in the schools and colleges? A few well-paid professionals who produce whatever suits them or those who are paying them, without attention to the teachers' diversified needs? Are we to be forced into mass instruction administered individually, as Oettinger suggests? Since materials for individual learners require a variety of approaches, where is the paragon programmer who will be able to be all things to all men (women, children)? As Dodge (1968:336) has said: "CAI demands far more planning and programming of instructional materials on the part of the teacher than does conventional classroom teaching. The computer cannot shrug its shoulders unless it is told to do so."

We would do well to heed Wilkins (1971:97): "In most cases, the expectations of the sixties were unrealized. For the seventies, our expectations must be specified, rather than hoped-for, concrete rather than speculative."

Further Practical Suggestions

1. Perhaps there is more future in the production of experimental units which can be used as part of any course rather than waiting until whole programs are completed. In this way, programmers would get earlier feedback and could adapt their

approach, seeking to develop the potential of the medium to supply what users need, before becoming frozen into a program which cannot be changed because of the years of work and enormous amounts of money which went into completing it. These units could be designed to fit into kits from which teachers extract what they need for specific purposes.

2. The profession must not be pressured into adopting and using expensive equipment which cannot do more than the teacher is able to do without it.

3. Another approach is to analyze what the expensive equipment (e.g, the computer) does which makes it successful in instruction, and then to work out less expensive ways of doing the same thing.

4. Use of the equipment should be made available to the community by opening the schools to adult evening classes. This can increase the local community's interest in providing the cost of the equipment.

5. Above all we must demonstrate that the cost of the equipment can be justified by greatly improved learning. We need concrete results in terms of specific realistic objectives.

6. Dodge (personal communication attached) suggests the training of media technicians in the needs of foreign languages.

7. We must reach the publishers and talk with them before they rush out with materials which the ordinary teacher cannot easily use and adapt. There must be continual sharing of information within the profession as to the usefulness of

various types of materials to counteract any deceptive advertizing. Richardson (ACTFL Review 4:317) says "Information on successfully developed audio-visual materials must be promulgated. Such materials must be carefully evaluated to determine the reasons for their success." We must not think only of tapes and computer programs, but keep in mind that there will be a continuing need for more and better films for T.V., classroom use, and even computer visuals. The need for users reports and for more articles in professional journals in which teachers tell what they did cannot be over-emphasized. (The NALLD Journal has tried to fill this gap but has not been sufficiently well supported.)

8. To return to the grassroots, Richardson (ACTFL Review 4:317) also states: "More planning and experimentation must be done to determine exactly how teachers and students can make the best use of the media available." We must trust the judgment of our teachers and involve them as initiators of and participants in classroom research and seek to develop more and more their professional confidence as keystones in any educational advance.

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